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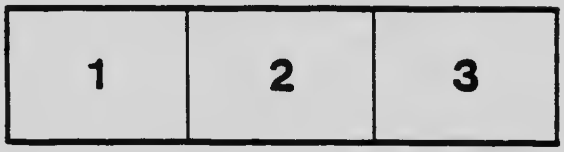

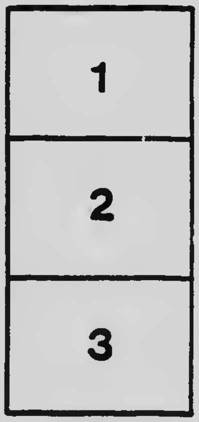

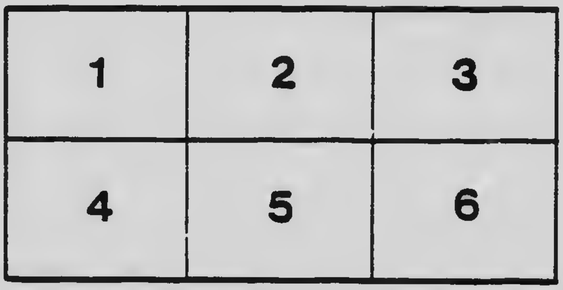

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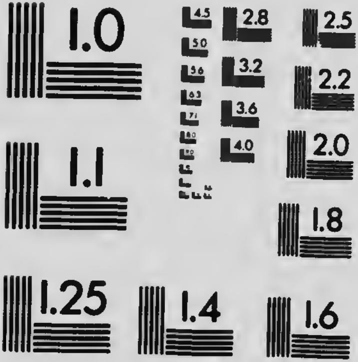

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LIVE STOCK BRANCH
OTTAWA - - - CANADA

FEEDING AND HOUSING OF SWINE

PAMPHLET No. 22

REPRINT NOVEMBER, 1917

Printed by Direction of the Hon. T. A. Crerar, Minister of Agriculture, Ottawa, Ont.

21647—1

DEPARTMENT OF AGRICULTURE.
LIVE STOCK BRANCH.
OTTAWA - - CANADA.

H. S. ARKELL,
Live Stock Commissioner.

Feeding and Housing of Swine.

This pamphlet has been especially prepared by Professor G. E. Day, in charge of the Bacon Production Campaign for the Dominion Government, in collaboration with Mr. E. S. Archibald, B.A., B.S.A., Dominion Animal Husbandman, and Mr. G. B. Rothwell, B.S.A., Assistant Dominion Animal Husbandman. It is designed as a simple practical treatise on the breeding, housing and the management of swine to be used as a handbook for ready reference by farmers in assisting them to manage to the greatest possible advantage the small herd of sows and market pigs which should be maintained on the average farm.

SELECTION, FEEDING AND MANAGEMENT.

BY

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THE BOAR.

Selection.—In these days, when pure-bred males are plentiful and reasonable in price, there is practically no excuse for using anything but a pure-bred boar, even though the sows be merely grades. Always select a lengthy, heavy-boned boar. Such a boar will get pigs which grow faster and make cheaper gains than the pigs from a small, short-bodied, fine-boned boar.

Yorkshire boar. A good type of sire to use.

Use.—The age at which a young boar may be first used depends largely upon his development. Some boars may be used to a few sows when not more than seven months old without apparent injury. As a rule, it is safer not to use a boar before he is eight months old, and to use him as sparingly as possible until he is a year old.

Exercise.—Probably nothing is more essential to the health and vigor of an animal than exercise. In summer it is usually a comparatively simple matter to provide exercise in a paddock or pasture lot, but in winter it is more difficult. A roomy pen should be provided, with a sheltered outside yard. Sometimes a boar can be fed in a well-littered barnyard, which makes a very good arrangement when practicable.

Feeding.—It requires good judgment to keep a boar in the best possible condition. Extremes are to be avoided. The over-fat boar does not make a satisfactory sire, as a rule, and a half-starved boar cannot transmit vigor and constitution to his progeny to the same degree that he would if properly managed. To get the best results the boar should be in fair flesh. A reasonable amount of fat on his bones will do him no harm if he gets sufficient exercise.

An exclusive meal ration will not give good results, especially if the ration is made up of corn. It is true that corn can be fed to a boar without injuring him, but it must be fed in the right way. Corn is fattening, but its exclusive use is debilitating, and the feeder must combine something with it to get good results. Equal parts ground oats and wheat middlings make a first-class meal ration when corn is not used. It gives sufficient bulk, and is nutritious without being heating or too fattening. Ground oats, middlings, or bran may be used singly to dilute corn or other heavy meal; in fact, a very great variety of grains may be fed so long as the feeder uses judgment.

Supplemental Feeds.—But a boar needs something besides grain and meal to be in his best condition. Skim-milk and buttermilk are excellent, and will give good results with meal even if nothing else is used. In winter, roots of any kind are much relished. They have a cooling, laxative effect, preventing constipation and keeping the animal thrifty and vigorous. If roots are not available, alfalfa hay of fine quality, or even red clover, may be used to give bulk to the ration. Some feed the alfalfa hay dry in racks, and others prefer to cut it and soak it with the meal ration or scald it with boiling water before mixing with the meal.

Summer management is usually simpler than winter. A pasture lot provided with shade is one of the best places to keep a boar. The grass or clover, or whatever the pasture may consist of, will furnish the bulky, succulent feed necessary for health, and gathering part of his food from pasture compels the boar to take exercise. If it is not possible to provide the pasture, he should be liberally supplied with green feed in his pen.

THE SOW.

Selection.—Whether pure-bred or grade, a sow selected for breeding should be from a prolific mother, and by a boar that comes of a prolific family, because fecundity is hereditary to a very high degree. It is safest to select a sow from a matured mother who has had a chance to demonstrate her usefulness. In making a selection, the number and character of the teats should be noted. A sow is more likely to make a good mother if she has at least twelve well-developed teats, set well apart, and the front ones well forward on the body. When a really good sow is once obtained, she should be kept in the herd as long as she retains her usefulness.

Age of Breeding.—The age at which a young sow is first bred will depend upon her development, but it is very seldom that it is advisable to breed her before she is eight months old, so that she will be at least a year old when she produces her first litter.

Exercise.—Though exercise is important in the case of the boar, it is doubly important with sows during the period of gestation. Without considerable exercise during this time, sows cannot be made to give satisfactory results. In summer, pastures should be provided in which there is plenty of shade. A good pasture affords ideal conditions for sows, the green feed and the exercise keeping the sows in the best possible condition.

Winter Exercise and Quarters.—The greatest difficulty will be encountered in giving the sows sufficient exercise during the winter. Where only a few sows are kept, it is often possible to give them the run of a barnyard, where they will take exercise rooting in the manure, or working in scattered straw or chaff to find what little grain it may contain. If a dry, well-bedded sleeping-place is provided, which is free from draughts, the conditions are about as good as can be obtained.

Group of Tamworth sows.

Feeding and Management during Gestation.—During the period of gestation the sow should be kept in good, strong condition, but not overloaded with fat. Extremes in condition are to be avoided. A sow may be kept in fairly high condition and will produce satisfactory litters, provided she takes plenty of exercise.

In districts where corn is plentiful, there is a temptation to feed almost exclusively upon corn. Such a method of feeding cannot give the best results, because corn does not furnish enough bone and muscle-forming constituents to properly develop the unborn pigs. It is also rather too fattening and heating to feed in large quantities to a sow at this stage. It is true that corn can be fed, but the ration recommended for the boar—namely, equal parts ground oats, and wheat middlings—will answer very nicely for the sow. The proportion of corn, if fed, should not be over one-third of the meal ration, and wheat middlings or bran may be used to dilute the corn meal without oats. In cold weather, if sows have a good deal of outdoor exercise, they may be fed more corn with safety than when they are kept pretty closely confined.

A meal ration which is preferred by the writer to all others is equal parts ground oats and middlings, leaving out corn altogether. It is possible, however, to use a wide variety of feeds, so long as the feeder realizes the importance of furnishing considerable bulk and of restricting the proportion of heating or highly fattening feeds.

As in the case of the boar, the sow requires something besides meal, and the furnishing of some such feeds as roots, or alfalfa, or red clover hay, is even more important than in feeding the boar. Skim-milk is also excellent, but is not always available for sows.

In summer, a pasture field will furnish the bulky part of the ration, and, if sows are in good condition to start with and are given a good pasture, they will get along very well without other feed for two or three months. They should be given a little meal for several weeks before farrowing, to accustom them to its use, and render the change less violent when they are taken into the pens. With regard to the quantity of meal, the feeder must be guided entirely by the condition of the sows.

Meal may be fed either wet or dry. When roots are fed, a good plan is to mix the dry meal with pulped roots, though the feeder has wide latitude in regard to the methods he may see fit to follow.

In cold weather, when sows are fed out-doors, very little water should be used in mixing their feed. It will be found better to furnish them with water separately, should they require it. If they are fed roots, they will take very little water in cold weather. It should be seen to, however, that they have water when they need it, and in hot weather an abundant supply of fresh water is very important.

Constipation is the bane of the swine breeder, and if the sow becomes constipated before she farrows, the chances are that she will lose her pigs, and possibly her own life. Constipation, therefore, is one of the main things to be guarded against at this time. When it once occurs very little can be done to overcome it and save the pigs, so that it is almost altogether a matter of prevention. If a sow is taken directly from a pasture field, shut up in a pen, and fed upon an exclusive meal ration, trouble is almost sure to occur. Radical changes in feeding are to be avoided, and the ration should be kept practically the same after taking the sow into the pen as it was before. If anything, the feed should be made rather more sloppy, and the green feed or roots should be supplied the same as they were before the sow was taken in. A small amount of linseed meal (oil meal) or ground flaxseed added to the ration is also helpful in preventing constipation. The wisdom of feeding meal to sows while on pasture for a time before they farrow can be readily appreciated, as it prevents a violent change in their ration. The sow should also be given a chance and encouraged to take exercise.

Farrowing.—The farrowing pen should be dry, well ventilated, and free from draughts. It is a good plan to provide the pen with a guard rail made of two by eight-inch planks fastened with their edges against the sides of the pen a little above the bed. These prevent the sow from lying against the partition, and lessen the danger of injury to the little pigs, which often find the space under the guard a very convenient refuge.

There is a difference of opinion as to the amount of bedding which should be used, some maintaining that the sow should be liberally supplied with bedding, and other that the bedding should be limited. The writer's experience is that active sows in comparatively light condition can generally be trusted with a liberal amount of bedding, but sows which are in high condition, or which are at all clumsy, had better be given only a moderate amount of cut straw.

It pays to treat sows kindly and to have them quiet. If they are on good terms with the attendant and regard him as a friend, there is much less danger of trouble from nervous, excited sows when the critical time of farrowing arrives.

Feeding and Management after Farrowing.—After farrowing the sow should not be disturbed, and if she lies quietly for ten or twelve hours, or even more, so much the better. When she wants anything she will go to the trough for it. At first she should have little more than a drink. A very thin slop of middlings and water will answer very well. If the weather is cold, tepid water should be used. During the first three days, great care must be exercised not to over feed, and the ration should be kept very light. After this, the feed may be gradually increased, taking a week or ten days to reach full feed. A good mother with a large litter requires very liberal feeding, but if the litter is small, it may be necessary to reduce the feed.

Many different rations are used for nursing sows. Equal parts of finely ground oats and wheat middlings, allowed to soak between feeds, makes a most excellent ration. If sweet skim-milk can be added to the mixture, it makes an almost ideal ration. Corn may be used as recommended for sows before farrowing, and in larger quantities if skim-milk is available. A certain amount of roots and green feed are always in order, but the sow should not be expected to subsist upon such feeds at this time. A limited amount of bulky, succulent feed helps to keep the sow healthy.

THE YOUNG PIGS.

Feeding and Management before Weaning.—When the pigs are born, the attendant should be on hand to see that everything goes well. If the pigs are strong and the sow lies quiet, it is better not to interfere. Sows that have been properly fed and given sufficient exercise seldom have difficulty in farrowing.

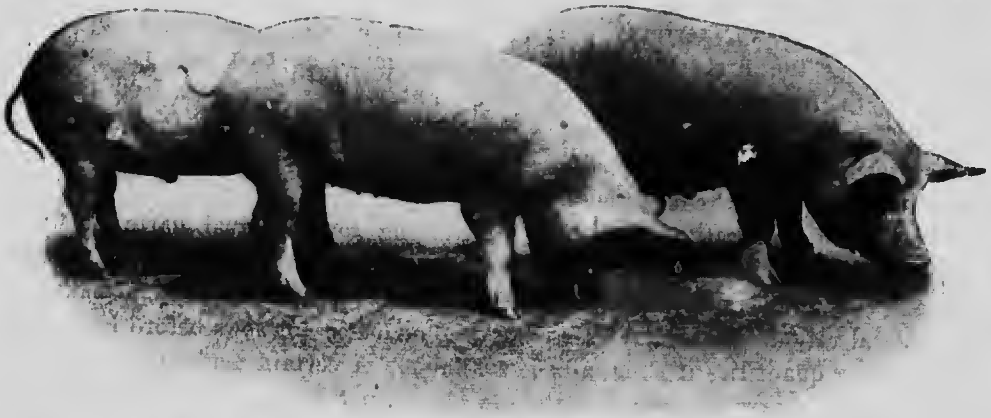
If the pigs seem somewhat weak, or if the sow is very restless, it is safer to place the pigs in a well-bedded box or basket to keep them out of the way until all are born. If the pen is chilly, a bottle of hot water placed in the bottom of the basket and covered with a blanket, with another blanket over the top of the basket, will help keep up the vitality of the pigs.

The pigs should be placed to the teat to suck as soon as possible. The weaker the pigs, or the colder the pen, the more important an early drink of the mother's milk becomes. If parturition is not unduly protracted, and if the pigs are strong, lively, and comfortable, they may wait for their first drink until all are born, but in such matters the attendant must use his judgment.

As soon as the sow appears to have settled down quietly, it is best to put the little pigs with her and leave them together. It is well not to interfere except when it is absolutely necessary.

By the time the pigs are three weeks old they will have learned to eat. If at all possible, it is a good plan to give them access to another pen in which is kept a small trough. Here they can be fed a little skim-milk with a very little middlings stirred into it. The quantity of middlings can be increased gradually as the pigs grow older. If they can be taught to nibble at sugar-beets or mangels during this time, so much the better. A small amount of soaked whole corn, or almost any other grain, scattered on the floor of the pen, will cause them to take exercise while hunting for it. If it is not possible to provide an extra pen, the sow may be shut out of the pen while the pigs are being fed. Many people simply allow the young pigs to eat with the sow, and many good pigs are raised in this way, but better results will be obtained if the pigs can be fed separately.

Exercise—is very important for young pigs, and every possible means of securing it must be adopted. If they are kept in a small pen with the mother, some of the best of them will likely become too fat, and probably sicken and die. Outdoor exercise is especially beneficial, but pigs should be protected from cold winds or from a very hot sun. If the sow is turned out with her pigs, it is not well to give her a very large range at first, as she is likely to travel too far and unduly tire the pigs.



Finished bacon hogs. This is the kind of hog which makes first-class export bacon, and which also produces meat economically. A good bacon hog will make gains in weight as cheaply as any other hog.

Boar pigs not intended for breeding purposes should be castrated before weaning, to get the best results, though there is not much danger from castrating at a later date, provided care is exercised in connection with the operation. Clean hands, a clean knife, and the use of a disinfectant upon the wound will obviate practically all danger.

Feeding and Management after Weaning.—The average farmer will find it most profitable to wean his pigs early enough to permit two litters a year to be raised. If the young pigs have been taught to eat as described, and skim-milk is available, they may be weaned successfully when six weeks old. It is true that many pigs are weaned before they are six weeks old, but it is seldom advisable to do so if they appear to be thriving with the sow. If skim-milk is not available, it is generally advisable to defer weaning for two weeks more, and special pains should be taken to have the pigs well accustomed to their new feed, and eating heartily before they are weaned.

Skim-milk and middlings make about the best feed for young pigs after weaning. Scalding the middlings is especially useful when no skim-milk is to be had, as it makes the pigs like the feed better. To scald the middlings, it is best to pour boiling water on them, cover the vessel, and allow to stand several hours, or from one time of feeding until the next. When the pigs are first weaned, it is better to feed four times a day, giving only a small quantity of feed each time, and taking care to keep the trough clean. When well started, they may be changed to three feeds a day.

It is not well to be in a hurry to commence feeding grain. Generally speaking, when pigs are about three months old a little grain may be introduced into their ration. Two parts of middlings and one part of corn meal or ground barley, mixed with skim-milk to form a slop, make an excellent ration for growing pigs. As the pigs grow older the proportion of grain to middlings may be increased, but at no time should they be fed exclusively, or almost exclusively, upon corn, because corn is a poor bone and muscle former. A few roots will be found most helpful in keeping young pigs healthy during the winter, and green feed of almost any kind will answer the purpose during the summer.

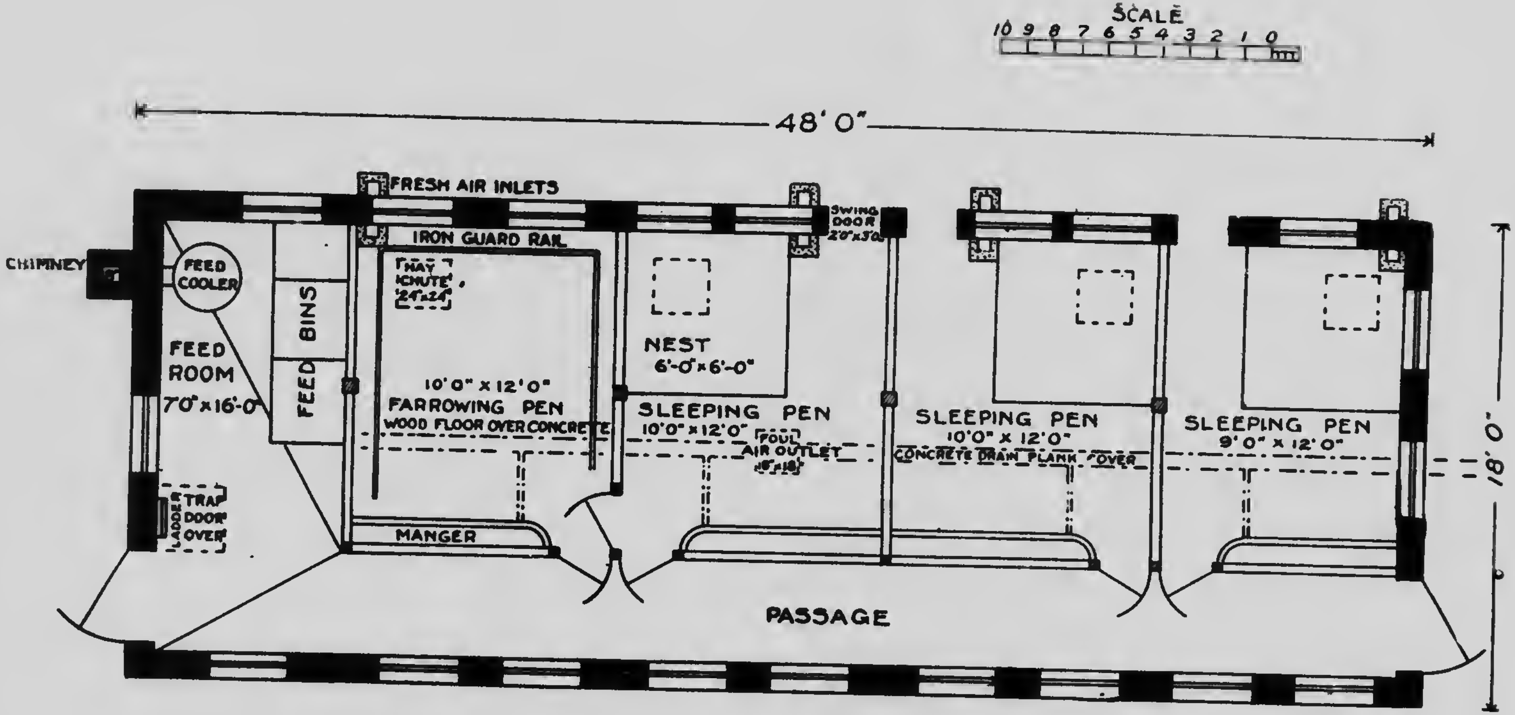
FATTENING.

Pastures.—Pasturing hogs in summer can be made to lessen the cost of pork production. Alfalfa makes one of the very best pastures, and red clover probably comes next. Rape may be sown in June to give fall pasture. A good pasture may be made by sowing a bushel of oats, a bushel of barley, a bushel of wheat, and seven pounds of red clover, per acre. This mixture will give pasture about six weeks after it is sown. The pigs will first eat the young grain plants, and if they are then removed for a time, the clover will grow up and make excellent pasture.

Winter Feeding.—Generally speaking, winter feeding is more expensive than summer feeding. There is little doubt that much of the advantage of summer feeding is due to more sanitary surroundings—that is, more fresh air and outdoor exercise, coupled with more succulent feed, which seems to aid digestion. The man who feeds hogs in winter, therefore, should aim to approach summer conditions as nearly as possible. He cannot get summer temperature, it is true, but he can provide a fair amount of fresh air, and feeds that will keep the digestive organs in good condition. It is just here that a man who grows a few roots for winter feeding has a great advantage over the man who does not. Skim-milk, buttermilk, and alfalfa may also be made to perform a useful part in giving variety and aiding the digestive organs to perform their functions properly.

Quantity of Feed.—The test of the skill of the feeder is his ability to keep just slightly within the appetite of the animals under his charge. He must watch the animals closely and see that they clean up with apparent relish all that he gives them. Feed left in the trough is a sign that something is wrong with the methods employed, and to have to cut back in the quantity of feed means a loss of time.

Regularity and Comfort.—Regularity in time of feeding is necessary to regularity in the appetite of the animal. The animal which is fed at the same hours every day will take more feed with less danger of surfeiting than the one fed at any time to suit the convenience of the feeder.



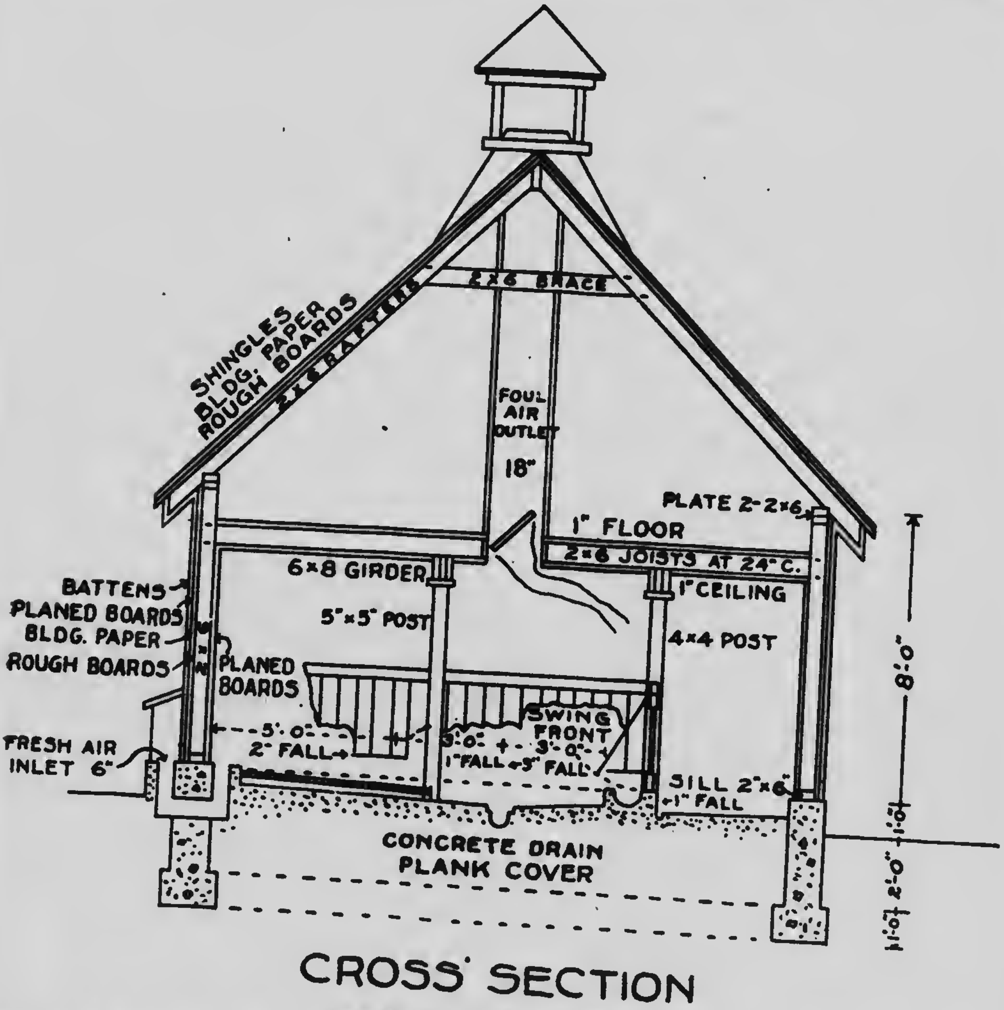
GROUND FLOOR PLAN

Ground Floor Plan of Cheap Piggery.

THE FARMER'S CHEAP PIGGERY.

BY
E. S. Archibald, B.A., B.S.A.
Dominion Animal Husbandman.

On most farms an expensive piggery is quite unnecessary. The sow or sows may be farrowed in a box stall of one of the other buildings or in an out building, where the young pigs may be fed until of sufficient size and strength to run outdoors. The brood sows, excepting when with litters, may be best and cheapest kept in a single board hog cabin. However, when a number of sows are kept, somewhat better provision must be made for farrowing the sows and feeding the litters. Hence there is a demand for a medium-sized piggery. The plan of a cheap but complete piggery is herewith given. In this plan storage is provided in the loft above, and, if desired, a root cellar might be provided underneath the feed room. If no storage is required in the piggery, this building might be erected



Cross Section of Cheap Piggery.

much more cheaply by lowering the post. However, it must be remembered that a reasonable amount of warmth is necessary for young and fattening pigs. For this reason the ceiling must be kept reasonably low—generally speaking, not more than 8 feet and not less than 6 feet at the post. If a single-storey piggery is desired, it is generally advisable to put in a false ceiling at a height of approximately 6 to 8 feet, and fill the space between the ceiling and rafters with straw in order to insulate the ceiling and provide also an absorbent for moisture. The single-storey piggery with the high or monitor roof, the ceiling of which is the underside of the rafters, is generally difficult to ventilate and, consequently, damp and cold.

The drainage system here described consists of a concrete gutter with a plank cover. The outlet of this is a tile through the wall at end pen.

SPECIFICATION.

1. The walls, 2 feet above the ground, should be of stone or concrete; from there up, wood. All concrete work in the walls should be mixed in the proportion of 1 part of best quality Portland cement, 2 parts of clean sharp sand, and 4 parts of crushed stone or clean gravel ranging in size from ½ to 1¼ inch. This piggery might be built on stone footings or cedar posts, but the more expensive wall is more permanent and eventually more economical.

2. The floors should be of concrete. It is best to have a layer of crushed stone, gravel or cinders underneath the concrete for insulation, as well as to make a good bed for the floor. The rough coat of the floor should be 3 inches in thickness and should be mixed in the same proportion as the walls. The finish coat should be mixed in the proportion of 1 part of best quality Portland cement, 2 parts of clean sharp sand, and 4 parts of crushed stone or clean gravel, ranging in size from ¼ to ⅞ inch.

3. The sills and plates to consist of two ply 2 x 6-inch plank with broken joints. The sills to be well bolted to the concrete foundation wall.

4. The walls are to be framed on the sills with 2 x 6-inch posts and studs, spaced at 24-inch centres. Where necessary, 2 x 6-inch strong bridging should be made over the windows. The covering of the wall from the outside consists of matched siding or dressed boards with battens over joints, 2-ply building paper and rough boards 1 or ½-inch next to the studs. If necessary to make the piggery extra warm it might pay to line the inside of studs with T. & G. flooring or shiplap and even to filling the space between studs with shavings or dry sawdust. The ceiling might be sheathed in the same way.

5. The floor joists of the loft are 2 x 6-inch plank spaced at 24-inch centres, securely spiked where they join the wall studs. The girts shall be 3 x 8-inch. The supporting posts in the piggery to be 5-inch squared posts, preferably with chamfered edges.

6. The divisions between pens should consist of 1-inch lumber, preferably matched. It is generally preferable to have a special 2½ x 4-inch milled cap checked to receive the sheathing. It is generally preferable to have a sill of the same bolted to a stub wall at the bottom of the division. This insures the pen divisions remaining in place.

7. The roof should be framed with 2 x 6-inch rafters, 2 x 6-inch collar beams and as per plan. The rafters to be covered on the outside with one ply of rough

boards, one ply of building paper, and with good quality cedar shingles laid 4½ inches to the weather, well nailed with two galvanized shingle nails per shingle.

8. Probably the cheapest and most satisfactory loft floor consists of 1-inch rough boards laid with ¾-inch spaces between. This method allows the straw in loft to absorb moisture and facilitate ventilation. The floor of loft, of course, must be kept covered with straw or the pens below would be very draughty. The greatest objection to this method is the dust falling into pens below. The tight loft floor and sheathing of ceiling of pens is the alternative which is more costly.

9. The lower sash of the window is bolted flush with the inside of the frame and the upper sash of the window is hinged to the top of the lower sash and fitted at the top with a check chain and spring catch so that it may be opened inward and provide extra ventilation when necessary. For very severe climates storm sashes well fitted on the outside of the frame may be necessary for the winter months.

10. The pen fronts over the troughs should be hinged at the top to a 3 x 5-inch headrail and open inward into the pen to facilitate feeding. Two small iron stops on the outside wall prevent the door from coming out into the passage, and a sliding bolt at the bottom on the outside shall secure the door when closed. Good, heavy home-made hinges, so made that the pigs cannot root either the doors or the fronts out of position, will be found very satisfactory.

11. All doors should have cement sills. The walls should be checked out so that the doors are only a few inches above the floor level. There might be provided in each pen a vertically sliding door to allow the pigs access to the yard. A cord running over a pulley across the pen to the passageway allows ease in controlling this door.

12. Cement troughs will be found cheapest and most durable.

13. The ventilation should consist of a fresh air intake for each pen, and foul air outlets leading from the ceiling of the piggery to the peak of the roof. A hood or cupola should be constructed over the end of foul air ventilator on the roof.

14. The outside of the piggery should be given two coats of paint or whitewash. This might be considered extravagant by many farmers w[illegible] not realize the keeping properties of paint or appreciate the attractiveness o[illegible] well-painted building, which is one of the best advertisements of a prosperous farmer. Well-painted buildings add very materially to the sale value of any farm and always prove an excellent investment. The interior of the piggery may be painted or whitewashed when necessary.

15. A litter carrier over the centre of the pens, installed in such a piggery, might be found a cheap investment in order to keep a sanitary, clean building.

16. Special care should be taken in grading the floors of the pens and grooving these floors and passages as per plans, to facilitate proper drainage.

COST OF PIGGERY.

The exact cost of this building depends on the local cost of lumber, cement, labour, etc., as well as the finish and painting which the farmer may choose and the labour which he performs on the work. Undoubtedly, if rough lumber is used throughout, the cost will be comparatively low. A fair estimate based on these qualifying factors would be $450.

MATERIAL LIST FOR PIGGERY.

	Bd. ft.
Sills — 1 ply 2″ x 6″ — 140′ x 2″ x 6″	140
Plates — 2 ply 2″ x 6″ — 280′ x 2″ x 6″	280
Posts wall — 8′ x 2″ x 6″ at 24″C — 80P, 8′ x 2″ x 6″	640
Posts — 8P 4″ x 4″ x 5′	64
4P 5″ x 5″ x 5′	50
Girts — 295′ x 3″ x 8″	400
Joists — 26 pieces — 18′ x 2″ x 6″	468
Rafters — 50 pieces—14′ x 2″ x 6″	700
Collar beams — 14 pieces 6′ x 2″ x 6″	84
Wall board rough 1″	1600
Wall board planed one side 1″ dressed 8″ to 10″ wide	1600
Battens for wall	
Flooring of loft 1″ rough ¾″ apart	1000
Roof boards 1″ rough	1400
Water tables, finish boards, etc	
Sheathing for vents ⅞″	140
Sheathing for pen divisions and fronts 1″	200
Sills for divisions 2″ x 5″ x 12′ (4P)	50
Caps for divisions 21″ x 4″, dressed	70
Doors and window frames and sashes, see plan	
Chimney, see plan	
Hardware including 2 ply bldg. paper in wall	
Total lumber — Board feet	8,886

Concrete rough floor 3″ deep — 216 cu. ft.
" finish coat 2″ deep — 144 cu. ft. } 15 cu. yds.
" mangers, 27 cu. ft.

A CHEAP PORTABLE HOG CABIN.

BY

G. B. Rothwell, B.S.A.,

Assistant Dominion Animal Husbandman.

The pig, more than any other class of breeding stock, benefits by fresh air and exercise. The cheapest and simplest way of obtaining these requisites is to provide outdoor life for the sow and boar practically the year round. To what extent, then, should they be sheltered?

The Cheap Hog Cabin.—It has been amply proven by experiment that a single board cabin, such as illustrated and described, and such as may be easily constructed by anyone fairly familiar with tools, affords sufficient shelter for breeding stock even in our more northern districts. In these small buildings, provided they are well supplied with bedding and in a sheltered location, stock boars and brood sows may be housed the year round, with the exception, in the case of the latter, of that time spent indoors in the farrowing pen, shortly previous to and following the arrival of the litter.

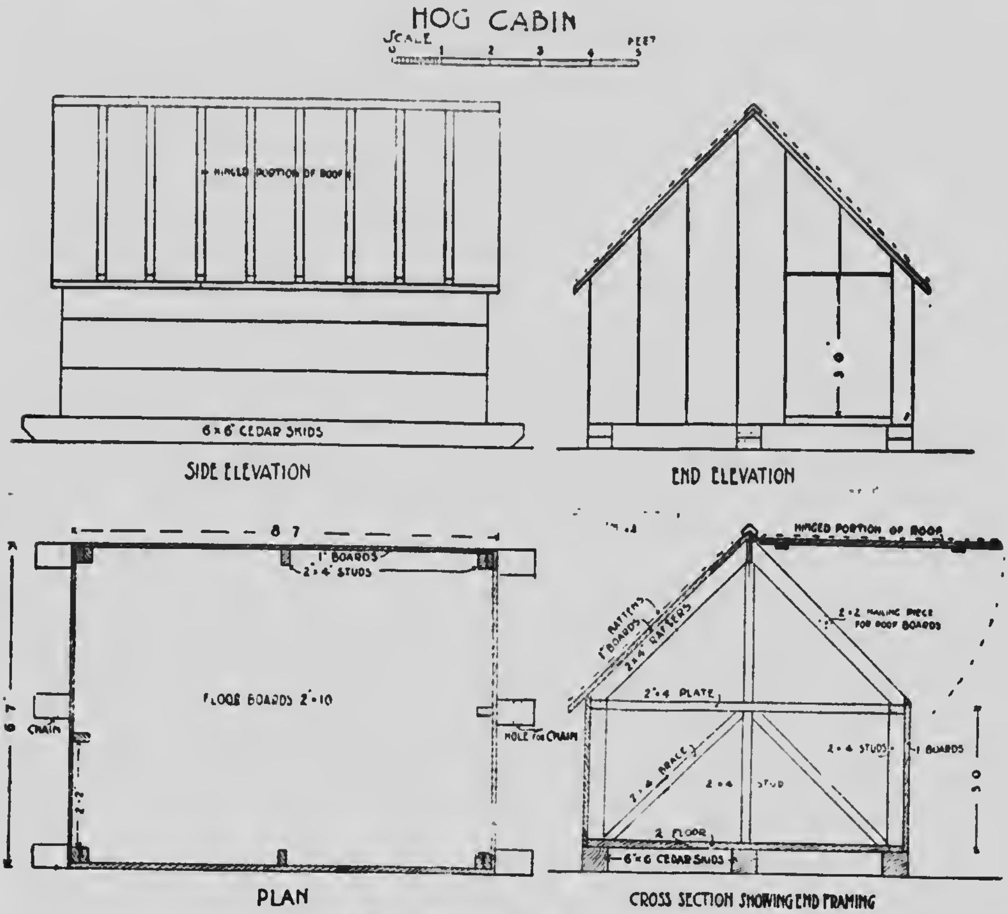
The Cheap Cabin versus the Expensive Permanent Piggery.—The farmer engaged in the extensive raising of hogs, will require a permanent building for farrowing sows and fattening pigs during the cold months. (See circular—"The Farmer's Piggery"). Such a building need not be expensive, however, and should be built with a capacity only sufficient for the above requirements. The man raising only a few litters each year, may, in many cases, avoid this expense, and, if he can arrange for accommodation in other buildings at the time mentioned, depend mainly on the portable cabin as a shelter for his pigs. Compared with the latter, the permanent building, is, relatively, very costly, both in the initial outlay and in the yearly charges, interest on investment, upkeep, depreciation, etc. Entirely aside from this aspect, the health of breeding stock is vastly improved by outdoor life, with the consequent lessening of susceptibility to disease. These benefits far more than offset the fact that outdoor wintering entails an increase in cost of feeding of 20 per cent. Realizing, then, the value of fresh air, dry quarters and exercise, it will be seen that in the permanent building such features are difficult to insure. In such a structure, outdoor conditions can be approximated only by efficient ventilation. Unless the temperature of the building is sufficiently raised by the nature or number of the occupants, brisk air circulation is impossible. The result is shown by the fact that many piggeries are damp, with the air more or less impure and clammy. The opening of doors and windows usually causes draughts and too rapid changes of temperature. Damp quarters, impure damp air and draughts are fertile causes of rheumatism, crippling and general unthriftiness. Lack of exercise also predisposes to the above diseases or to an over fat flabby constipated condition, so undesirable in the in-pig sow, and the cause of small or weak poorly developed litters. A combination of all constitutes a serious menace to the successful raising of swine. In a well constructed, well ventilated building, however, in which are housed considerable numbers of feeders, change of air is frequent. Further, with such a class of stock, unlimited exercise is not advisable.

With the outdoor cabin, however, fresh dry air is available, and with a yard adjoining, exercise is not only possible but may be actually forced on the animal. With plenty of dry bedding and allowing four or five sows to each house, the rigors of northern winters apparently have not the slightest ill effect. Sows, so housed, are vigorous, healthy and active. Little difficulty is met with in breeding or at farrowing time (see circular, "The Feeding of Swine"), and with suitable feeds, large, vigorous, thrifty litters may be expected. With the boar similar improvement in health will be shown, with corresponding desirable results in the litters sired by him.

GENERAL RULES FOR OUTDOOR HOUSING.

1. Supply plenty of bedding at all times.
2. Don't move the brood sow from inside to outside conditions abruptly, during cold weather. Above all things, don't breed her immediately after such a change.
3. Remove the pregnant sow from winter quarters to the farrowing pen a week or ten days before she is due to litter.
4. Supply the boar with a sheltered location in winter and with shade during the heat of summer.

5. Accidents to the pigs are frequent during winter, due to icy yards. Keep ice away from about troughs, by chopping, and spread ashes, sand, or a little salt about the runs.



Details for Portable Hog Cabins.

BRIEF SPECIFICATION OF HOG CABIN.

BASE.

The structure rests upon three skids or pieces of 6″ x 6″ cedar. For this purpose, dressed cedar poles may be used to advantage.

WALLS.

The walls consist of 12 2″ x 4″ studs, covered outside with 1″ boarding. At the top of the stud is a 2″ x 4″ plate. The studs are braced by 2″ x 4″ braces placed diagonally between them, as shown.

FLOORS.

The flooring consists of 2″ plank laid across the 6″ x 6″ skids.

ROOF.

The roof is built with 2 2″ x 4″ rafters at each end of the cabin. A 2″ x 2″ or 2″ x 4″ purlin may be used if necessary to carry the 1″ roof boards which may be battened at the joints, or the boards may be laid four or five inches apart and the space covered with a second row of boards, on top, thus making battens unnecessary and providing a stronger more weather proof roof.

When the cabin is to be used for summer housing, a section on one or both sides of the roof should be hinged, at the peak, as shown. This allows of the section being raised a foot or so, providing a good circulation of air. With a closed roof, the temperature inside the cabin becomes so unbearable that the pigs will lie in the sun rather than in the cabin,—a condition to be avoided.

Portable Hog Cabins at the Central Experimental Farm.

DOOR.

The door opening is 2′2″ wide and 3′0″ high. A door hinged at the top may be added, or heavy sacking, weighted at the bottom, may be tacked over the opening along the top. This covering the pigs may readily move aside when entering, the weights causing it to fall into position once more.

DIMENSIONS.

This structure is 6′7″ by 8′7″ with a 3′0″ post, and is capable of holding four or five aged pigs and six or seven younger pigs very comfortably. It must be clearly understood that a cabin of this size is too large and cold for one or two sows, especially if young.

LUMBER LIST.

The following lumber list is suggested where all material was purchased. In many cases much of the lumber, as, for example, the skids or runners, might be obtained on the farm.

	Ft. B.M.
Skids, 3 pcs. 10′ x 6″ x 6″	90
Plate, 2″ x 4″ 30 lin. feet	20
Studs, 13 pcs. 3′ x 2″ x 4″	26
Rafters, 4 pcs. 4½′ x 2″ x 4″	12
Braces, 2 pcs. 4′ x 2″ x 4″	5
Roof Boarding (1″) 49½ sq. ft	49½
Wall Boarding (1″) 110 sq. ft	110
Floor 2″ plank 56 sq. ft	112
Nailing Boards for roof boarding, 2 pcs. 8′ 3″ x 2″ x 4″	5½
Battens, 16 pcs. 5½′ x 2″ x 1″	15
Battens for hinged part of roof, 2 pcs. 3′ x 1″ x 3″	1½
Nails, Paint, etc.	

Two coats of good paint would add considerably to the life of the structure.

For a building so simply constructed as the above, no further description is necessary. Changes in detail may be made by the builder, if necessary, provided the size is altered to suit the number of pigs to be housed therein. Another type known as the "A" shaped cabin is frequently built, in which the roof extends from the floor in the shape of an inverted V. Experience has shown, however, that this type is unsatisfactory in that the animals rub and scratch themselves against the inside of the roof, soon weakening the connection between the latter and the floor, causing the sides to burst out.

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